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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,157	11/21/2003	Howell Schwartz	DC-05505	2121

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EXAMINER	
BLACKMAN, ROCHELLE ANN J	
ART UNIT	PAPER NUMBER
2851	

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/719,157	SCHWARTZ ET AL.	
	Examiner	Art Unit	
	Rochelle Blackman	2851	

-- The MAILING DATE of this communication appears on the cover sheet with th correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/19/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because on pg. 13, lines 1-9, should be omitted. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 2, 7, 13, and 17 are objected to because of the following informalities: In claim 2, line 2, the word - -to- - should be between "operable" and "increase". In claim 7, "senor" should be - -sensor- -. In claim 13, line 3, "colmunator" should be - - - columnator- -. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 7-11, 13-18, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Stark et al., U.S. Patent No. 6,520,648.

Regarding claims 1-4, and 7, Stark discloses a "system for managing projector bulb life"(see FIGS. 2-5), the system comprising: a "luminance sensor disposed to sense the luminance of the projector bulb"(for "luminance sensor", see 162 and for "projector bulb", see 112, 156 of FIG. 3); a "luminance controller interfaced with the luminance sensor and a power driver of the projector bulb, the luminance controller operable to reduce the power driver output to limit projector bulb luminance at or below a setpoint level associated with a desired projector bulb life if the maximum luminance of the projector bulb is greater than a predetermined brightness"(for "luminance controller" see 131 and for "power driver", see 154 of FIG. 3); "wherein the luminance controller is further operable increase power driver output to maintain projector bulb luminance substantially at the setpoint level if the sensed luminance falls to a predetermined brightness"(see "luminance controller 131 in FIG. 3); a "switch disposed between the power driver and the luminance controller, the switch operable to selectively disable the projector bulb luminance controller interface with the power driver"(see col. 6, lines 50-67 and col. 8, lines 1-6); "wherein the projector bulb comprises an ultra high pressure mercury vapor bulb"(see col. 3, lines 44-45); "wherein the luminance sensor comprises a visible light senor aligned to sense light leakage from a mirror of the projector"(see "luminance sensor" 162 and 130 in FIG. 3).

Regarding claims 8-11 and 13-15, Stark discloses a "method for managing projector bulb life"(see function of elements in FIGS. 2-5), the method comprising "sensing the luminance of the projector bulb"(see function of 112, 156, and 162 in FIG. 3); "determining that the sensed luminance exceeds a luminance threshold associated

with a desired projector bulb life; and reducing the power applied to the projector bulb to reduce the luminance of the projector bulb to at or below the luminance threshold associated with the desired projector life"(see function 134 and 154 in FIG. 3); determining that the sensed luminance falls below a luminance threshold associated with a minimum desired available luminance at a maximum brightness setting; and increasing the power applied to the projector bulb to increase the luminance of the projector bulb to the luminance threshold of the minimum desired luminance for the maximum brightness setting"(see function of 134 and 154 in FIG. 3); "wherein the luminance threshold associated with a desired projector bulb life and the luminance threshold associated with minimum desired available luminance are substantially equal when the projector is set at maximum brightness"(see FIG. 5); "engaging a switch to override the reducing of the power applied to the projector bulb so that the luminance exceeds the threshold"(see col. 6, lines 50-67 and col. 8, lines 1-6 12); "passing the light from the projector bulb through a first aperture to a colmunator for illuminating an image"(see entrance of 122 in FIG. 3); "passing the light from the projector bulb through a second aperture to a luminance sensor for sensing the luminance"(see entrance of 158 in FIG. 3); "wherein the bulb provides light for a digital mirror device projector having a color wheel, and wherein sensing the luminance further comprises sensing luminance at the color wheel; wherein the bulb provides light for a digital mirror device projector having a mirror for projecting an image, and wherein sensing the luminance further comprises sensing luminance of light leakage at the mirror"(see 130 and 162 of FIG. 3).

Regarding claims 16-20, Stark discloses a "projector for display of information"(see FIGS. 2-5), the projector comprising: an "image operable to display the information"(see 150 of FIG. 3); a "bulb operable to provide light to illuminate the image"(see 112 of FIG. 3), a "power driver interfaced with the bulb and operable to provide selectable variable power to illuminate the image with selectable variable luminance"(see 154 and 156 of FIG. 3); a "luminance sensor disposed to sense the luminance of the bulb'(see 162 of FIG. 3); and a "luminance feedback controller interface with the power driver and the luminance sensor, the luminance feedback controller operable to control power applied by the power driver according to the luminance sensed by the luminance sensor to achieve a predetermined bulb parameter"(see 131 of FIG. 3); "wherein the luminance feedback controller achieves a desired bulb life by limiting power applied by the power driver to restrict luminance sensed by the luminance sensor at or below a predetermined setpoint; wherein the luminance feedback controller achieves a desired maximum available luminance from the bulb by increasing power applied by the power driver to increase luminance sensed by the luminance sensor at or above a predetermined setpoint when the selected luminance exceeds a predetermined level"(see function of "luminance feedback controller" 131 in FIG. 3); a "switch interfaced with the luminance feedback controller and operable to disengage control by the luminance feedback controller of the power driver"(see col. 6, lines 50-67 and col. 8, lines 1-6); "wherein the image comprises output of a digital mirror device"(see 130 of FIG. 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stark et al., U.S. Patent No. 6,520,648 as applied to claims 1 above, and further in view of Forehand, U.S. Patent No 6,089,740.

Regarding claim 5, Stark discloses the claimed invention except that a mercury vapor bulb instead of a xenon halogen lamp is used.

Forehand discloses lamp apparatus 10 that uses xenon halogen light bulb in order to achieve integration of advanced optics with a light source that is an incandescent bulb, 100 that can deliver at least 1000 mw/cm^2 (see col. 11, lines 23-26).

It would have been obvious to one of ordinary skill in the art at the time invention was made to substitute a xenon halogen light bulb for the mercury vapor lamp in the Stark reference, in order to achieve integration of advanced optics with a light source, as taught by Forehand and provide a bulb with more wattage, thus providing a higher maximum luminance of the projector bulb.

2. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stark et al., U.S. Patent No. 6,520,648.

Stark discloses an "infrared sensor associated with an infrared filter of the projector" or "passing the light from the projector bulb through an infrared filter"(see col.

3, lines 55-59). However, Stark does no appear to disclose a luminance sensor that comprises an infrared sensor" associated with an infrared filter of the projector or wherein sensing the luminance further comprises "sensing the infrared light" at the infrared filter.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the "luminance sensor" of the Stark reference to sense infrared light or provide an additional sensor in the Stark reference to sense infrared light, in order to ensure complete or maximum filtering of infrared light from the light emitted by the projector light bulb.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RB

Rodney Fuller
Primary Examiner